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Brad A. Armstrong  
PO BOX 2048  
Carson City, NV 89702

EXAMINER

BODDIE, WILLIAM

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



Continuation of Attachment(s) 3. Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :4/27/07, 6/27/07; 12/19/07; 1/25/08.

## DETAILED ACTION

### *Allowable Subject Matter*

1. Applicant is advised that the Notice of Allowance mailed March 29<sup>th</sup>, 2007 is vacated. If the issue fee has already been paid, applicant may request a refund or request that the fee be credited to a deposit account. However, applicant may wait until the application is either found allowable or held abandoned. If allowed, upon receipt of a new Notice of Allowance, applicant may request that the previously submitted issue fee be applied. If abandoned, applicant may request refund or credit to a specified Deposit Account.

2. The indicated allowability of claims 1-3 and 5-8 is withdrawn in view of the newly discovered reference(s) to:

US 5,613,137 - Bertram

US 5,164,697 - Kramer

US 3,942,148 - Nishioka

US 3,198,922 - Rohacs

US 5,203,563 - Loper

3. Rejections based on the newly cited reference(s) follow.

### *Information Disclosure Statement*

4. It should be noted that a vast majority of the pieces of art submitted by the Applicants in the April 27<sup>th</sup> 2007 IDS were lacking descriptive information, specifically a year of publication. Additionally several pieces of art in the June 27<sup>th</sup>, 2007 and December 19<sup>th</sup>, 2007 IDS were also lacking descriptive information.

5. The January 25<sup>th</sup>, 2008 IDS has been fully considered.

***Priority***

6. Applicant's claim for the benefit of a prior-filed application under 35 U.S.C. 119(e) or under 35 U.S.C. 120, 121, or 365(c) is acknowledged. Applicant has not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. 120 as follows:

7. The later-filed application must be an application for a patent for an invention which is also disclosed in the prior application (the parent or original nonprovisional application or provisional application). The disclosure of the invention in the parent application and in the later-filed application must be sufficient to comply with the requirements of the first paragraph of 35 U.S.C. 112. See *Transco Products, Inc. v. Performance Contracting, Inc.*, 38 F.3d 551, 32 USPQ2d 1077 (Fed. Cir. 1994).

8. The disclosure of the prior-filed application, Application No. 08/677,378, fails to provide adequate support or enablement in the manner provided by the first paragraph of 35 U.S.C. 112 for one or more claims of this application. Specifically claim 8 is seen as lacking enablement in application 08/677,378. The Examiner was unable to find support for limitations detailing a motor with offset weight operating as the active feedback.

***Drawings***

9. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the four variable

resistor potentiometers must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1-3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram et al. (US 5,613,137) in view of Kramer (US 5,164,697) and further in view of Nishioka (US 3,942,148).

**With respect to claim 1**, Bertram discloses, an imagery controlling apparatus (fig. 1a), comprising:

three-dimensional imagery (col. 10, lines 40-43); the three-dimensional imagery is displayed on a television (16 in fig. 1a); at least in part controlling the three-dimensional imagery is circuitry (fig. 2L, for example).

It should be further noted that Bertram discloses a dual joystick device (fig. 2L) to control the three dimensional imagery and contemplates a potentiometer-based system in determining the position of the joysticks (col. 15, lines 10-12).

Bertram does not expressly disclose a sensor with On/Off data and proportional data or any variable resistors.

Kramer discloses, a sensor (6 in fig. 1); circuitry reads the sensor output as

On/Off data (col. 5, lines 44-46; "snap effect"); and the circuitry reads the sensor output as

proportional data (col. 5, lines 44-48);

a single independent button is located to activate the sensor (22 in fig. 1), the button is shaped and positioned to be depressed by a single human finger or thumb of a hand of a user (29 in fig. 1);

a passive tactile feedback structure (25 in fig. 1), the passive tactile feedback structure is a resilient dome associated with the sensor (col. 5, lines 26-51),

the resilient dome providing a soft snap tactile feedback vibration to the finger with depression of the button (col. 5, lines 26-51).

Kramer and Bertram are analogous art because they are both from the same field of endeavor namely, push button input device design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to construct the thumb buttons (130a in fig. 2L) of Bertram, which at least partly control the three-dimensional imagery, with the button and sensor of Kramer for the benefit of increased functionality without complicating manufacturing (Kramer; col. 1, lines 47-51).

Neither Kramer nor Bertram expressly disclose variable resistors.

Nishioka discloses, a first variable resistor (17 in fig. 2); the first variable resistor comprises: a rotational shaft (17a in fig. 2); and terminals (24a-c in figs. 2-3); the terminals of the first variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);

a second variable resistor (18 in fig. 2); the second variable resistor comprises: a rotational shaft (18a in fig. 2); and terminals (25a-c in figs. 2-3); the terminals of the second variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);

a third variable resistor (19 in fig. 2); the third variable resistor comprises: a rotational shaft (19a in fig. 2); and terminals (26a-c in figs. 2-3); the terminals of the third variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);



a fourth variable resistor (20 in fig. 2); the fourth variable resistor comprises: a rotational shaft (20a in fig. 2); and terminals (27a-c in figs. 2-3); the terminals of the fourth variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3).

Nishioka, Kramer and Bertram are analogous art because they are from the same field of endeavor namely, input device and button design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the four switches of Bertram and Kramer used in determining the joystick position with the four potentiometers of Nishioka for the benefit of smooth movement and simultaneous control as well as a reduced thickness of the device (Nishioka; col. 1, lines 27-43).

**With respect to claim 2**, Bertram, Kramer and Nishioka disclose the imagery controlling apparatus according to claim 1 (see above).

Nishioka further discloses, wherein the first, second, third and fourth variable resistors are rotary potentiometers (col. 1, lines 44-64; for example).

**With respect to claim 3**, Bertram, Kramer and Nishioka disclose, the imagery controlling apparatus according to claim 2 (see above).

Neither Bertram nor Kramer expressly disclose four sensors activated by a rotation actuating member.

Nishioka further discloses, four sensors (24-27 in fig. 3) are connected to the circuitry (fig. 3), the four sensors positioned to be activated by a rotation actuating

member (23b in fig. 1), said member shaped to rotate about a fulcrum (23 in fig. 1) as a pivot point (fig. 1).

At the time of the invention it would have been obvious to one of ordinary skill of art to activate the sensors of Bertram and Kramer as taught by Nishioka for the benefit of a smaller form factor, for example (col. 1, lines 27-43).

**With respect to claim 5**, as claim 5 does not claim any additional limitations over the previously rejected claim 2, claim 5 is rejected on the same merits shown above in claims 1-2.

13. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bertram et al. (US 5,613,137) in view of Kramer (US 5,164,697) and Nishioka (US 3,942,148) and further in view of Rohacs (US 3,198,922).

**With respect to claim 6**, Bertram, Kramer and Nishioka discloses, imagery controlling apparatus according to claim 5 (see above).

Neither Bertram, Kramer nor Nishioka expressly disclose four pressure sensor connected to the circuitry.

Rohacs discloses, four pressure sensors (col. 2, lines 36-39; 32-33 in fig. 8) are connected to circuitry (fig. 8), the four pressure sensors positioned to be activated by a rotation actuating member (37-38, for example in fig. 8), said member shaped to rotate about a fulcrum (23 in fig. 8) as a pivot point (fig. 8).

Bertram, Kramer, Nishioka and Rohacs are analogous art because they are all from the same field of endeavor namely input device and button design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the multi-directional sensors of Rohacs in the joysticks of Bertram, Kramer and Nishioka, for the well-known benefit of increased functionality.

14. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Loper, III (US 5,203,563) in view of Kramer (US 5,164,697) and further in view of Nishioka (US 3,942,148).

**With respect to claim 7**, Loper discloses, an imagery controlling apparatus (fig. 1), comprising:

three-dimensional imagery (col. 1, lines 29-41); the three-dimensional imagery is displayed on a television (18 in fig. 1); at least in part controlling the three-dimensional imagery is circuitry (col. 1, lines 15-21), and

an active tactile feedback structure (30, 33 and 34 in fig. 2), the active tactile feedback structure providing a vibration to the hand of the user (col. 1, lines 57-69).

It should be further noted that Loper contemplates the device could be used to simulate piloting an aircraft (col. 3, line 23).

Loper does not expressly disclose a sensor with On/Off data and proportional data or any variable resistors.

Kramer discloses, a sensor (6 in fig. 1); circuitry reads the sensor output as

On/Off data (col. 5, lines 44-46; "snap effect"); and the circuitry reads the sensor output as

proportional data (col. 5, lines 44-48);

a single independent button is located to activate the sensor (22 in fig. 1), the button is shaped and positioned to be depressed by a single human finger or thumb of a hand of a user (29 in fig. 1);

a passive tactile feedback structure (25 in fig. 1), the passive tactile feedback structure is a resilient dome associated with the sensor (col. 5, lines 26-51),

the resilient dome providing a soft snap tactile feedback vibration to the finger with depression of the button (col. 5, lines 26-51).

Kramer and Loper are analogous art because they are both from the same field of endeavor namely, input device design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to include the button and sensor of Kramer on the device of Loper for the benefit of increased functionality without overly complicating manufacturing (Kramer; col. 1, lines 47-51).

Neither Kramer nor Loper expressly disclose variable resistors.

Nishioka discloses, a first variable resistor (17 in fig. 2); the first variable resistor comprises: a rotational shaft (17a in fig. 2); and terminals (24a-c in figs. 2-3); the terminals of the first variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);

a second variable resistor (18 in fig. 2); the second variable resistor comprises: a rotational shaft (18a in fig. 2); and terminals (25a-c in figs. 2-3); the terminals of the second variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);

a third variable resistor (19 in fig. 2); the third variable resistor comprises: a rotational shaft (19a in fig. 2); and terminals (26a-c in figs. 2-3); the terminals of the third variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3);

a fourth variable resistor (20 in fig. 2); the fourth variable resistor comprises: a rotational shaft (20a in fig. 2); and terminals (27a-c in figs. 2-3); the terminals of the fourth variable resistor are soldered to the circuitry (clear from fig. 2-3) located on a circuit board (11 in fig. 3).

Nishioka, Kramer and Loper are analogous art because they are from the same field of endeavor namely, input device design.

At the time of the invention it would have been obvious to one of ordinary skill in the art to replace the steering mechanism of Kramer and Loper with the joystick and four potentiometers of Nishioka for the benefit of smooth movement and simultaneous control as well as a reduced thickness of the device (Nishioka; col. 1, lines 27-43) as well as to better simulate piloting an aircraft.

**With respect to claim 8**, Loper, Kramer and Nishioka disclose, imagery controlling apparatus according to claim 7 (see above).

Loper further discloses, wherein the active tactile feedback structure comprises a motor (36 in fig. 4); the motor connected to an offset weight (70 in fig. 4), wherein the motor rotates the offset weight providing the active tactile feedback vibration (col. 4, lines 59-64; for example).

### ***Conclusion***

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15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William L. Boddie whose telephone number is (571) 272-0666. The examiner can normally be reached on Monday through Friday, 7:30 - 4:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wlb 2/7/08

  
ALEXANDER EISEN  
SUPERVISORY PATENT EXAMINER